

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of manufacturing rare-earth sintered magnets, characterized by subjecting an alloy composed of 20 to 30 wt% of a constituent R (R being samarium alone or at least 50 wt% samarium in combination with one or more other rare-earth element), 10 to 45 wt% iron, 1 to 10 wt% copper and 0.5 to 5 wt% zirconium, with the balance being cobalt and inadvertent impurities, to the steps of, in order, melting, casting, coarse size reduction, milling, molding in a magnetic field, sintering and aging so as to form a sintered magnet, surface machining the sintered magnet by cutting and/or grinding, metal plating the surface-machined magnet with a metal-plating metal, then heat treating the metal-plated magnet at 80 to 850°C for a period of from 10 minutes to 50 hours in an argon, nitrogen, air or low-pressure vacuum atmosphere having an oxygen partial pressure of 10^{-4} Pa to 50 kPa to form an oxide layer of the metal-plating metal as a hydrogen resistance layer, the metal-plating metal being one or more selected from among copper, nickel, cobalt, tin, and alloys thereof.

2-3. (Canceled)

4. (Previously Presented) A rare-earth sintered magnet comprising:
20 to 30 wt% of a constituent R (R being samarium alone or at least 50 wt% samarium in combination with one or more other rare-earth element);
10 to 45 wt% iron;
1 to 10 wt% copper; and

0.5 to 5 wt% zirconium, with the balance being cobalt and inadvertent impurities, wherein said rare-earth sintered magnet has a metal oxide layer and/or a metal nitride layer on a surface thereof, over an intervening metal-plating layer, the intervening metal-plating layer comprising one or more selected from among copper, nickel, cobalt, tin, and alloys thereof.

5. (Currently Amended) The rare-earth sintered magnet of claim 4, wherein the metal-plating layer and the metal oxide layer and/or metal nitride layer have a combined thickness of at least 1 μm but not more than 100 μm , ~~and the metal oxide layer and/or metal nitride layer has a thickness of at least 0.1 μm but not more than 100 μm .~~

6. (Canceled)

7. (Currently Amended) A method of manufacturing rare-earth sintered magnets, characterized by subjecting an alloy composed of 20 to 35 wt% of a constituent R (R being one or more rare-earth element selected from among neodymium, praseodymium, dysprosium, terbium and holmium), up to 15 wt% cobalt, 0.2 to 8 wt% boron, and up to 8 wt% of one or more element selected from among nickel, niobium, aluminum, titanium, zirconium, chromium, vanadium, manganese, molybdenum, silicon, tin, gallium, copper and zinc as an additive, with the balance being iron and inadvertent impurities, to the steps of, in order, melting, casting, coarse size reduction, milling, molding in a magnetic field, sintering and heat treatment to form a sintered magnet, surface machining the sintered magnet by cutting and/or grinding, metal plating the surface-machined magnet with a metal-plating metal so as to form a multilayer comprising a

copper bottom layer followed by one or more nickel layer, then heat treating the metal-plated magnet at 80 to 700°C for a period of from 10 minutes to 50 hours[[,]] in an argon, nitrogen, air or low-pressure vacuum atmosphere having an oxygen partial pressure of 10^{-4} Pa to 50 kPa to form an oxide layer of nickel as a hydrogen resistance layer

~~the metal plating metal being one or more selected from among copper, nickel, cobalt, tin, and alloys thereof.~~

8-9. (Canceled)

10. (Currently Amended) A rare-earth sintered magnet comprising:

20 to 35 wt% of a constituent R (R being one or more rare-earth element selected from among neodymium, praseodymium, dysprosium, terbium and holmium);

up to 15 wt% cobalt;

0.2 to 8 wt% boron; and

up to 8 wt% of one or more element selected from among nickel, niobium, aluminum, titanium, zirconium, chromium, vanadium, manganese, molybdenum, silicon, tin, gallium, copper and zinc as an additive, with the balance being iron and inadvertent impurities,

wherein said rare-earth sintered magnet has a metal oxide layer and/or a metal nitride layer on a surface thereof, over n metal-plating layers (n being an integer such that $n \geq 1$),

the metal-plating layer being a multilayer comprising ~~one or more selected from among a~~ copper bottom layer[[,]] followed by one or more nickel layer[[,]] ~~co~~balt, ~~tin, and alloys thereof.~~

11. (Currently Amended) The rare-earth sintered magnet of claim 10, wherein the metal-plating layer and the metal oxide layer and/or metal nitride layer have a combined thickness of at least 1 μm but not more than 100 μm , and the metal oxide layer and/or metal nitride layer has a thickness of at least 0.1 μm but not more than 100 μm .

12. (Canceled)

13. (Previously Presented) The method of manufacturing rare-earth sintered magnets of claim 1, wherein the surface-machined magnet is metal plated with a metal-plating metal so as to form a copper layer or a nickel layer, or a multilayer comprising a copper bottom layer followed by one or more nickel layer.

14. (Previously Presented) The rare-earth sintered magnet of claim 4, wherein the intervening metal-plating layer is copper layer or nickel layer , or a multilayer comprising a copper bottom layer followed by one or more nickel layer.

15-16. (Canceled)

17. (Previously Presented) The method of manufacturing rare-earth sintered magnet of claim 1, wherein the metal plating is electroplating.

18. (Previously Presented) The rare-earth sintered magnet of claim 4, wherein the metal plating is electroplating.

19. (Previously Presented) The method of manufacturing rare-earth sintered magnet of claim 7, wherein the metal plating is electroplating.

20. (Previously Presented) The rare-earth sintered magnet of claim 10, wherein the metal plating is electroplating.

21 (New) The method of manufacturing rare-earth sintered magnets of claim 1, wherein the plating thickness is 1 to 100 μm and the thickness of the oxide layer is 0.1 to 100 μm .

22. (New) The rare-earth sintered magnet of claim 5, wherein the thickness of the metal oxide layer and/or metal nitride layer is at least 0.1 μm but not more than 20 μm .

23. (New) The method of manufacturing rare-earth sintered magnets of claim 7, wherein the plating thickness is 1 to 100 μm and the thickness of the oxide layer is 0.1 to 100 μm .

24. (New) The rare-earth sintered magnet of claim 11, wherein the thickness of the metal oxide layer and/or metal nitride layer is at least 0.1 μm but not more than 20 μm .